

Notulae to the Italian native vascular flora: 8

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Abstract

In this contribution, new data concerning the distribution of native vascular flora in Italy are presented. It includes new records, confirmations, exclusions, and status changes to the Italian administrative regions for taxa in the genera *Ajuga*, *Chamaemelum*, *Clematis*, *Convolvulus*, *Cytisus*, *Deschampsia*, *Eleocharis*, *Epipactis*, *Euphorbia*, *Groenlandia*, *Hedera*, *Hieracium*, *Hydrocharis*, *Jacobaea*, *Juncus*, *Klasea*, *Lagurus*, *Leersia*, *Linum*, *Nerium*, *Onopordum*, *Persicaria*, *Phlomis*, *Polypogon*, *Potamogeton*, *Securigera*, *Sedum*, *Soleirolia*, *Stachys*, *Umbilicus*, *Valerianella*, and *Vinca*. Nomenclatural and distribution updates, published elsewhere, and corrigenda are provided as Suppl. material 1.

Keywords

Endemic, Floristic data, Italy, Nomenclature

How to contribute

The text for the new records should be submitted electronically to Chiara Nepi (chiara. nepi@unifi.it). The corresponding specimen along with its scan or photograph have to be sent to FI Herbarium: Sezione di Botanica "Filippo Parlatore" del Museo di Storia Naturale, Via G. La Pira 4, 50121 Firenze (Italy). Those texts concerning nomenclatural novelties (typifications only for accepted names), status changes, exclusions, and confirmations should be submitted electronically to: Fabrizio Bartolucci (fabrizio.bartolucci@gmail.com). Each text should be within 2,000 characters (spaces included).

Floristic records

Ajuga tenorei C.Presl (Lamiaceae)

+ **BAS**: Viggianello (Potenza), Piano Ruggio (WGS84: 39.917186N, 16.136930E), pascolo nitrofilo su suolo calcareo, 1550 m, 9 June 2016, *F. Caldararo* (FI). – Species confirmed for the flora of Basilicata.

This species is reported as doubtful for Basilicata (Bartolucci et al. 2018b), although several ancient and recent records are known for this region from the Pollino mountain range (Tenore 1831; Terracciano 1891; Cavara and Grande 1913; Gavioli 1947; Tomaselli et al. 2003). This report appeared in the web-forum Acta Plantarum (https://www.floraitaliae.actaplantarum.org/viewtopic.php?t=86853&p=555535).

L. Bernardo, F. Caldararo

Chamaemelum fuscatum (Brot.) Vasc. (Asteraceae)

+ CAL: Caloveto (Cosenza), lungo la SS 531 al km 6,5 (WGS84: 39.554431N, 16.763299E), accumuli di suolo argilloso alla base di un impluvio, 106 m, 6 March 2019, *G. Maiorca* (FI, CLU). – Species new for the flora of Calabria.

This species is reported for Emilia-Romagna (not confirmed), Toscana, Lazio, Abruzzo, Campania, Puglia (not confirmed), Sicilia, and Sardegna (Bartolucci et al. 2018b). We found a rich population on a limited surface, and supposedly it may be widespread on the clayey hills of the Ionian side of Calabria, but rarely observed because of its early flowering time.

L. Bernardo, G. Maiorca, N.G. Passalacqua

Clematis recta L. (Ranunculaceae)

+ **LIG**: Maissana (La Spezia), pendici E di M. Traversa (WGS84: 44.27129N, 9.57325E), ai piedi di una rupe, 800 m, 21 June 2019, *G. Barberis*, *M. Calbi* (GE). – Species confirmed for the flora of Liguria.

The species was cited by Bertoloni (1842–1844) "in Liguria orientali in montibus del Bracco", "ex Liguria occidua in valle Urìa" and by De Notaris (1844, under the

name *Clematis erecta* All.) "ad fossarum margines in pratis prope Sestri di Levante". When revising the photographic archive of Lucio Cortesogno, a petrographer and passionate naturalist, a slide was found taken in June 1994 in the "Bracco" area. Research in that area allowed the discovery of the species.

G. Barberis, M. Calbi

Convolvulus sabatius Viv. subsp. sabatius (Convolvulaceae)

- (A) **PUG**. - Regional alien subspecies to be excluded from the flora of Puglia.

All the records of this subspecies for Puglia (Bianco 1969; Marchiori et al. 1993; Perrino et al. 2013; Bartolucci et al. 2018b) should be referred to *C. sabatius* subsp. *mauritanicus*, recently collected in the same localities in which *C. sabatius* subsp. *sabatius* was reported (Galasso et al. 2019).

V. Buono, R.P. Wagensommer, L. Forte

Cytisus spinosus (L.) Lam. (Fabaceae)

- BAS. - Species to be excluded from the flora of Basilicata.

In Basilicata, *Cytisus spinosus* was reported by Gavioli (1947, under the name *Calycotome spinosa* Lk. var. *typica* Fiori) for two localities of the Ionian sector of the region (Policoro, Bosco di S. Giorgio). Subsequently, it was no longer reported (see e.g., Conti et al. 2006). Moreover, *C. spinosus* is considered absent or doubtfully occurring in the regions surrounding Basilicata, and in the work by Lattanzi (2008) only *C. infestus* (C.Presl) was reported for Basilicata. Based on the the revision of the specimens collected by Gavioli and stored in FI (barcodes FI056257, FI056258), which turned out to be *C. infestus*, we conclude that *C. spinosus* should be excluded from the flora of Basilicata.

L. Rosati, L. Lastrucci, S. Fascetti

Deschampsia cespitosa (L.) P.Beauv. subsp. parviflora (Thuill.) Dumort. (Poaceae)

+ **TOS**: Pigelleto, Monte Amiata (Siena), cerreta tagliata (WGS84: 42.806373N, 11.667289E), 950 m s.l.m., 24 Jun 2010, *P. Castagnini* (FI). – Subspecies new for the flora of Toscana.

This subspecies is known for acidophilous broad-leaved forests from lowlands to highlands, but, until now, it was rarely observed in Italy (Bartolucci et al. 2018b).

E. Banfi, G. Bonari, G. Bacaro

Eleocharis mamillata (H.Lindb.) H.Lindb. subsp. austriaca (Hayek) Strandh. (Cyperaceae)

0 **CAL**: La Sila (Calabria) Regione Ciricilla zona piana umida, m. 1370, 27 June 1950, *G. Sarfatti*, *R. Corradi* (FI barcode FI055691). – Species not recently confirmed for the flora of Calabria.

During an ongoing study of herbarium material belonging to *Eleocharis* subser. Eleocharis (Lastrucci et al. 2018), a specimen formerly identified by Sarfatti as "Heleocharis palustris R. et S. a typica Fiori" and stored in FI within the folder of Eleocharis palustris (L.) Roem. & Schult. aroused our interest for the absence of a clear necklike constriction separating achene and stylopodium. This feature differentiates the E. mamillata group from the E. palustris group (Strandhede 1966). Moreover, the stomatal structure is typical of the *E. mamillata* complex, with guard cells longer than subsidiary cells and protruding at the ends of the stomata (Strandhede 1966). According to Bartolucci et al. (2018b), E. mamillata occurs in Italy with two subspecies: E. mamillata subsp. mamillata (recorded in Friuli-Venezia Giulia and doubtfully occurring in Valle d'Aosta and Piemonte) and E. mamillata subsp. austriaca (recorded in Valle d'Aosta, Lombardia, Trentino-Alto Adige, Veneto, and Friuli-Venezia Giulia). The conical structure of the stylopodium and the number of bristles varying between 4 and 5 allowed us to attribute the Calabrian specimen to E. mamillata subsp. austriaca. The historical presence of this taxon in Calabria could be related to the particular geological and tectonic history of central-southern Calabria, which is a territory of Alpine-European derivation, once close to the Sardinian-Corsican block and subsequently dislocated in its current position (see Haccard et al. 1972; Amodio-Morelli et al. 1976; Bernardo et al. 2011).

L. Lastrucci, L. Lunardi, G. Fiorini, D. Viciani

Epipactis meridionalis H.Baumann & R.Lorenz (Orchidaceae)

- LAZ. - Species to be excluded from the flora of Lazio.

Baumann and Lorenz (1988) reported the only finding of *Epipactis meridionalis* for Lazio based on a collection by R. Lorenz from Filettino and Guarcino (Frosinone), still kept in his private herbarium. A recent revision of these specimens has led us to attribute them to *E. helleborine* (L.) Crantz, for the observed differences as compared to *E. meridionalis* (i.e. leaves not rounded and longer, epichile only slightly bent backwards, upper stem and ovarium not maroonish). Accordingly, *E. meridionalis* should be excluded from the flora of Lazio.

R. Lorenz, B. Petriglia, S. Buono, S. Magrini

Euphorbia peplis L. (Euphorbiaceae)

+ **LIG**: Cogoleto (Genova), foce del T. Lerrone (WGS84 44.39066N, 8.66406E), spiaggia ghiaiosa, 0,5 m, 16 September 2011, *M. Calbi* (GE). – Species confirmed for the flora of Liguria.

Euphorbia peplis was indicated in the 19th century and in the first half of the 20th century for several sites throughout Liguria, before the intensive use of beaches for bathing purposes (see Barberis and Mariotti 1983). It was reported by Bartolucci et al. (2018b) as no longer recorded for the region.

G. Barberis, M. Calbi

Groenlandia densa (L.) Fourr. (Potamogetonaceae)

+ **MAR**: Pioraco (Macerata), torrente Scarzito, presso la cava di ghiaia (WGS84: 43.170817N, 12.982622E), c. 453 m, 8 July 2015, *L. Gubellini* (FI, PESA). – Species new for the flora of Marche.

Groenlandia densa is a eurosibiric hydrophyte, that inhabits stagnant and current waters. In Italy, it has been reported in almost all administrative regions, except for Sardegna and Marche, and by mistake in Friuli Venezia Giulia (Bartolucci et al. 2018b). This species is quite rare and localized in the Marche, where it grows in flowing waters along with Zannichellia pedunculata Rchb., Ranunculus trichophyllus Chaix, and Callitriche sp.

L. Gubellini, N. Hofmann

Hedera helix L. subsp. helix (Araliaceae)

+ SAR. – Status change from naturalized to native for the flora of Sardegna.

This sub-Atlantic taxon has been considered as native occurring in all the administrative regions of Italy, with the exception of Sardegna, where it is reported as naturalized (Bartolucci et al. 2018b). This status seems to be due to a misunderstanding, since the naturalization of the taxon referred to *H. helix* f. *poetarum* (Nicotra) McAll. & A.Rutherf., which sometimes spreads, by vegetative reproduction, in parks and gardens. On the other hand, the nominal subspecies is also native in Sardegna, as suggested by its distribution throughout the island, as well as the presence of many monumental plants on the Supramontes and in other mountain areas.

G. Bacchetta, G. Calvia, L. Podda

Hieracium pseudogrovesianum Gottschl. (Asteraceae)

+ **TOS**: Abetone (Pistoia), versante N del M. Caligi sopra F. La Piastra (WGS84: 44.080896N, 10.739797E), faggeta, ca. 1500 m, 23 July 2016, leg. *G. Gestri*, det. *G. Gottschlich* (FI); Casone di Casamarconi (Pistoia), sopra l'abitato (WGS84: 44.019688N, 10.826457E), bosco misto di castagno e faggio, ca. 1000 m, 24 April 2015, leg. *G. Gestri*, det. *G. Gottschlich* (PI No. 021574); Garfagnana, Sella di Campaiana (Lucca), sul versante N della Pania di Corfino (WGS84: 44.206480N, 10.383362E) faggeta, ca. 1500, 30 June 2018, leg. *G. Gestri*, det. *G. Gottschlich* (PI No. 021594). – Species new for the flora of Toscana.

This species is endemic to Italy, and it was recorded so far only for Lazio and Abruzzo (Peruzzi et al. 2014, 2015). Based on the available material, it was not possible to attribute the Tuscan specimens to one of the five subspecies known for this species (Bartolucci et al. 2018b).

G. Gestri, G. Gottschlich

Hydrocharis morsus-ranae L. (Hydrocharitaceae)

+ CAL: Laureana di Borrello (Reggio Calabria), Lago dell'Aquila (WGS84: 38.510242N, 16.028392E), 34 m, in un'ansa del lago, 12 September 2013, *S. Cannavò*, *C.M. Musarella*, *G. Spampinato* (FI, REGGIO); Laureana di Borrello (Reggio Calabria), Lago dell'Aquila (WGS84: 38.510242N; 16.028392E), 34 m, in un'ansa del lago, 11 September 2014, *S. Cannavò*, *C.M. Musarella*, *G. Spampinato* (REGGIO). – Species new for the flora of Calabria.

Hydrocharis morsus-ranae is a Eurasian hydrophyte, typically growing in oligomesotrophic and still waters. This species occurs in many northern and central Italian regions, whereas it is no longer recorded in Campania (Bartolucci et al. 2018b). The present record refers to several individuals growing in a bight on the eastern part of Lake Aquila, where a small tributary flows into the lake (Spampinato et al. 2019).

C.M. Musarella, S. Cannavò, G. Spampinato

Jacobaea maritima (L.) Pelser & Meijden subsp. bicolor (Willd.) B.Nord. & Greuter (Asteraceae)

+ **BAS**: Maratea (Potenza), Monte S. Biagio (WGS84: 39.988893N, 15.725553E), garrigues with *Erica multiflora*, 588 m a.s.l., 22 May 2012, *L. Cancellieri* (FI). – Species new for the flora of Basilicata.

Jacobaea maritima subsp. bicolor is recorded as native only for Sicilia, Calabria, Campania, and as naturalized alien for Lazio (Bartolucci et al. 2018b). This Italian endemic subspecies is widespread mainly on coastal cliffs, rocks, and screes (Peruzzi et al. 2006; Passalacqua et al. 2008). The population of Monte S. Biagio fills a distribution gap along the southern Tyrrhenian coast.

L. Cancellieri, F. Filibeck

Juncus atratus Krock. (Juncaceae)

+ ITALIA (UMB): Castel Santa Maria, Cascia (Perugia), piano carsico soggetto a periodiche inondazioni (WGS84: 42.714089N, 13.106811E), 1065 m s.l.m., 11 July 2018, *D. Gigante*, *F. Bonini*, Confirm. *L. Lastrucci* (FI). – Species confirmed for the flora of Italy (Umbria).

Juncus atratus is a central European-southern Siberian wet-meadow species (Kirschner et al. 2002), with a central range extending in the steppe zone of sub-continental western Eurasia (Hultén and Fries 1986). In central Europe, this species is very rare and considered endangered (Schnittler and Gunther 1999). According to Pignatti et al. (2017), in Italy it was reported, probably by mistake, for Lombardia and for one locality in Veneto, in the plains in the surroundings of Verona. This species was considered as occurring in Veneto by Conti et al. (2005), but it was then treated as doubtful by Bartolucci et al. (2018b). We detected *J. atratus* in a karst plain regularly flooded in

winter and spring, in the transition area along the borders of a small temporary lake, in phytocoenoses dominated by *Alopecurus rendlei* Eig or *Eleocharis palustris* (L.) Roem. & Schult. subsp. *palustris*, subjected to summer mowing. The population is rather small and extremely localized. The most prominent distinctive features of this species are the blackish-brown tepals and capsula (*vs.* greenish or pale/castaneous-brown in *J. acutiflorus*, *J. articulatus*, *J. striatus*, and *J. thomasii*), the distinctly separated 5- to 10-flowered heads (*vs.* globose 8–30-flowered heads in *J. striatus*), the leaves with a polygonal (angled) transection (vs. circular in *J. articulatus* and *J. acutiflorus*), and the acute capsula (*vs.* obtuse in *J. thomasii*) (Kirschner et al. 2002). In addition, leaf septa are filled with a spider-like cortex (*vs.* hollow in *J. acutiflorus*) (Bernhardt and Britvec 2005). In *Juncus acutiflorus*, outer tepals are slightly curved at the apex (Kirschner et al. 2002; Pignatti et al. 2017), a trait never observed in our specimens. The identification has been confirmed by a comparison with several foreign specimens collected mostly in central Europe and stored in FI, formerly identified by the specialist Sven Snogerup. D. Gigante, F. Bonini, L. Lastrucci

Klasea nudicaulis (L.) Fourr. (Asteraceae)

+ **LIG**: Pigna (Imperia), Monte Grai, south-eastern slope (WGS84: 43.99501N, 7.67675E), mountain grassland on calcareous substrate, 1740 m, 10 July 2018, leg. *D. Dagnino*, det. *D. Dagnino*, *C. Turcato* (FI, GE No. 636). – Species new for the flora of Liguria.

Klasea nudicaulis occurs in Italy, France, Spain, and Marocco (Cantó 1984). In Italy, it is known in Piemonte, Trentino-Alto Adige, Emilia Romagna, Marche, Umbria, Lazio, and Abruzzo (Bartolucci et al. 2018b). Nevertheless, the distribution of this species is still scarcely known, as shown by some recent studies (Bertolli and Prosser 2006; Iocchi et al. 2010). Bartolucci et al. (2018b) consider this species as reported by mistake in Liguria, because the old records in the literature and the herbarium specimens stored in GE pertain to the French Maritime Alps, near the Italian border. Recent records confirmed the presence of this species in south-western Piemonte, close to the Ligurian border (Pascale 2009). We found K. nudicaulis in the Ligurian Maritime Alps, in the south-eastern slope of Monte Grai, within the Special Area of Conservation cod. IT1315421 "M. Toraggio – M. Pietravecchia" and the "Alpi Liguri Regional Natural Park". In the site of discovery, K. nudicaulis grows on calcareous substrate in a species-rich mountain grassland, dominated by Helictotrichon sempervirens (Vill.) Pilg. with small shrubs and rare trees (Pinus sylvestris L.). Klasea nudicaulis is, generally, considered as a valuable and rare species in Italy; it is protected by law in Piemonte (L.R. 32/1982) and Umbria (L.R. 49/1987).

D. Dagnino, C. Turcato, L. Minuto

Lagurus ovatus L. subsp. ovatus (Poaceae)

+ (CAS) **PIE**: Torino, quartiere Mirafiori, Strada delle Cacce (WGS84: 45.019169N, 7.638775E), interstizio tra marciapiede e piano stradale, 244 m, 4 June 2019, *M. Lonati*, *A. Mainetti*, *S. Ravetto Enri* (FI). – Casual regional alien species new for the flora of Piemonte.

Lagurus ovatus L. subsp. ovatus is a widespread annual circum-Mediterranean taxon typical of dunes, fallows, and open areas. In Italy, this species has been reported in all regions, except Piemonte. It was probably accidentally introduced by humans from Mediterranean coastal regions. In Piemonte, as well as in Lombardia and Trentino-Alto Adige, it behaves as casual alien species (Bartolucci et al. 2018b).

M. Lonati, A. Mainetti, S. Ravetto Enri

Leersia oryzoides (L.) Sw. (Poaceae)

+ **SAR**. – Status change from casual to native for the flora of Sardegna.

This species, which was first reported as native in Sardegna by Calvia and Urbani (2007), has been more recently considered as an alien casual species by Arrigoni (2015) and Bartolucci et al. (2018b). However, it occurs in rich populations along the rivers flowing to the eastern side of Lake Coghinas, both Riu Mannu di Berchidda and Riu Mannu di Oschiri, where it grows in well-preserved environments, together with several other species typical of riverbanks. It also occurs in a minor stream, in the countryside of Oschiri, flowing along the southern side of Mount Limbara.

G. Calvia, A. Ruggero

Linum catharticum L. subsp. catharticum (Linaceae)

+ **SAR**: Seui (Ogliastra), propaggini settentrionali del Montarbu in località Fundu de Tonneri (WGS84: 39.890700N, 9.363300E ± 50 m), margini freschi di strada e mulattiera in arbusteto montano con esposizione a nord, substrato carbonatico, 980 m, 27 June 2019, *G. Mereu* (FI). – Species new for the flora of Sardegna.

This taxon is recorded for all regions of the Italian peninsula (Bartolucci et al. 2018b)as well as in neighbouring Corsica (Jeanmonod and Gamisans 2013). The identification of the subspecies is based on the description provided by Jeanmonod and Gamisans (2013).

G. Mereu

Linum radiola L. (Linaceae)

+ **PUG**: Brindisi, Posticeddu (WGS84: 40.68999N, 17.84094E), waterlogged soils, 5 m, 6 April 2017, *S. Brullo*, *L. Beccarisi* (FI). – Species confirmed for the flora of Puglia.

Linum radiola is a paleotemperate species, recorded from the western side of the Italian peninsula (Pignatti et al. 2017). As regards Puglia, there are only old records from Gargano (Rabenhorst 1849; Béguinot 1909; Fenaroli 1970), but since then the species has no longer been confirmed (Bartolucci et al. 2018b). Recently, it was collected in a new locality of southern Puglia along the rocky coast near Posticeddu (Brindisi), outside the eastern boundary of Torre Guaceto State Nature Reserve. In this locality, it is limited to small rocky pools that are submerged until early spring, where it grows together with other hygrophilous microphytes. Based

on field investigations, *L. radiola* is currently represented by a small and discontinuous population, distributed over an area of about 2,000 m². Previously, the flora of this area was studied by Vaccari (1920), but this species is not mentioned in his floristic checklist.

L. Beccarisi, V. Tomaselli, S. Brullo

Nerium oleander L. subsp. oleander (Apocynaceae)

+ (CAS) **PIE**: Pallanza (Verbano Cusio Ossola), Corso Europa (SS34), lato S (WGS84: 45.927688N, 8.560491E), 212 m, ciglio stradale, 22 April 2019, *N.M.G. Ardenghi & S. Mossini* (FI). – Casual regional alien species new for the flora of Piemonte.

A single robust individual was collected along a roadside in Pallanza, clearly grown from seeds dispersed by plants cultivated for ornamental purposes. This species has been recorded as a casual alien from most of the northern Italian regions, except Piemonte (Bartolucci et al. 2018b).

N.M.G. Ardenghi, S. Mossini

Onopordum illyricum L. subsp. illyricum (Asteraceae)

+ (NAT) **VEN**: Battaglia Terme (Padova), Monte Ceva, Colli Euganei, lungo un sentiero sul versante meridionale arido, sassoso, aprico e solatio (WGS84: 45.308360N, 11.774450E), a c. 160 m s.l.m., 9 June 2019, *C. Tietto* (FI, PAD, *Herb. Tietto Pernumia*). – Naturalized regional alien species new for the flora of Veneto.

This steno-Mediterranean species, which mostly occurs in the central and southern Italian regions, is rare in the northern part of peninsular Italy, with punctiform stands near Firenze and Piombino in Toscana, close to Pesaro in Marche, and near Norcia in Umbria, being common in Lazio, Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, and Sardegna (Pignatti et al. 2018; Bartolucci et al. 2018b). Concerning northern Italy, there are a few records close to Trieste in Friuli Venezia Giulia, as an alien species probably coming from Istria, where it is more widespread (Poldini 2009; Rottensteiner 2014; Pignatti et al. 2018). Onopordum illyricum grows in ruderal communities of warm and xeric habitats close to urban areas, along road margins, near stables, most often in sites with a Mediterranean climate. In the Euganen hills, there is a small, expanding population consisting of about 50 vigorous plants, growing on the stony, sunny and xeric southern slopes of Mt. Ceva. The arrival of this species is likely recent, since it was not mentioned by Masin and Tietto (2005, 2006), who had thoroughly explored the site in previous years. In the same place, the alien Opuntia stricta (Haw.) Haw. was reported for the first time in Italy (Tietto and Chiesura Lorenzoni 1999); its population presently extends to almost the entire upper southern slope of the hill, over 40 years after it was introduced.

P.L. Nimis, C. Tietto, R.T. Messa Ballarin, F. Ballarin

Persicaria lapathifolia (L.) Delarbre subsp. lapathifolia (Polygonaceae)

+ **CAL**: Scalea (Cosenza), foce del Fiume Lao (WGS84: 39.777440N, 15.802962E), alveo fluviale sassoso e asciutto, 4 m, 20 August 2016, leg. *A. Stinca* et *M. Ravo*, det. *A. Stinca* (FI). – Species new for the flora of Calabria.

Persicaria lapathifolia subsp. lapathifolia was recorded for many northern, central, and southern Italian regions up to Campania (Bartolucci et al. 2018b).

A. Stinca, A. Esposito

Phlomis fruticosa L. (Lamiaceae)

+ (CAS) **TOS**: Alberese (Grosseto), Versante NW di Poggio Bernarda (WGS 84: 42.665N, 11.103E), grassland dominated by *Asphodelus ramosus*, on limestone, 45 m a.s.l., 9 March 2019, *G. Filibeck* (FI). – Casual regional alien species new for the flora of Toscana.

This Mediterranean species, typical of cliffs and garrigues (Pirone 1995, Pignatti et al. 2018), is reported as native only for Sicilia, Calabria, Puglia, Abruzzo, and as casual alien for Veneto (Bartolucci et al. 2018b). The population found near Alberese has most probably been introduced, perhaps escaped from gardens. Currently, this species forms a small population in a wooded pasture on a hill near a farmhouse. The individuals were fruiting, but there was no evidence of seed germination. The presence of this species is considered, at the present time, as casual.

G. Filibeck, L. Cancellieri

Polypogon subspathaceus Req. (Poaceae)

+ **LIG**: Genova Quinto in via Marasso (WGS84: 44.3856303N, 9.0225700E), interstizi della pavimentazione di terrazza, 30 m, 29 May 2019, *S. Peccenini* (FI, GE). – Species new for the flora of Liguria.

This report extends northwards the Tyrrhenian distribution of this species, so far reported only for Emilia-Romagna, Toscana, Lazio, Puglia, Sicilia, and Sardegna (Bartolucci et al. 2018b).

S. Peccenini

Potamogeton coloratus Hornem. (Potamogetonaceae)

- BAS. - Species to be excluded from the flora of Basilicata.

In Basilicata, *P. coloratus* was only indicated for "Lago di Pignola" (Potenza Province) by Gavioli (1934, 1947, under the name *P. nodosus* L. var. *colorata* Vahl), and subsequently by Colacino et al. (1990) in a detailed vegetation study of this biotope. In recent years, during the monitoring of aquatic plant communities, *P. coloratus* was never observed, while *P. lucens* L. and *P. nodosus* Poir. were frequently detected. To ascertain the possibility of a regional extinction, we revised the specimens stored in

FI (barcode FI055688) and HLUC (Nos. 12007, 12008). All the specimens formerly attributed to *P. coloratus* showed characters belonging to *P. lucens*, such as the presence of submerged mucronate leaves, a petiole of relatively constant length along the stem and the absence of floating leaves (Wiegleb and Kaplan 1998). We conclude that all the specimens have to be referred to *P. lucens* (already known for this locality). Thus, *P. coloratus* must be excluded from the flora of Basilicata.

L. Rosati, L. Lastrucci, G. Potenza, S. Fascetti

Securigera securidaca (L.) Degen & Dörfl. (Fabaceae)

+ CAL: Santa Severina (Crotone), colline alla periferia del centro abitato (WGS84: 39.148707N, 16.912977E), incolti a margine strada, 210 m, 8 May 2019, *L. Bernardo*, *G. Maiorca* (FI, CLU No. 26254). – Species confirmed for the flora of Calabria.

This Mediterranean species was generically reported for Calabria by Pignatti (1982). Lacking any further bibliographic record and/or finding, it was then indicated for Calabria as doubtfully occurring by Conti et al. (2005) and, subsequently, as "recorded by mistake" by Bartolucci et al. (2018b).

L. Bernardo, G. Maiorca, N.G. Passalacqua

Sedum acre L. (Crassulaceae)

+ (NAT) **SAR.** – Status change from native to naturalized for the flora of Sardegna.

This species was first reported in Sardegna by Moris (1827), who confused it with *S. alpestre* Vill. and did not report it in following works, then by Corrias and Diana-Corrias (1983). Arrigoni (2015) confirmed its presence on the island based on a herbarium sample collected in Mount Limbara. There, this species is known at least since 1993, and it grows along roadsides, on walls, paths and other disturbed sites from 500 to 1250 m a.s.l.. Recently, it was found also in the State Forest of Fiorentini (Anela, Sassari) and along the Provincial Road SP5, between Aglientu and Vignola (Sassari), growing always in non-natural sites, such as fallow land and roadsides. For this reason, it should be treated as a non-native species, which is naturalized in Sardegna, rather than native, as in Bartolucci et al. (2018b).

G. Bacchetta, G. Calvia, A. Ruggero

Soleirolia soleirolii (Req.) Dandy (Urticaceae)

+ (NAT) **CAL**: Cosenza, Centro storico nel parco comunale "Villa Vecchia" (WGS84: 39.554431N, 16.763299E), rocce umide nei pressi delle fontane, 267 m, 30 May 2019, *L. Bernardo*, *G. Maiorca* (FI, CLU). – Naturalized regional alien species new for the flora of Calabria.

In Italy, *Soleirolia soleirolii* is reported as native only for Sardegna and Toscana, but it occurs as naturalized or casual alien in many other regions (Bartolucci et al. 2018b). It was probably introduced in the Villa Vecchia of Cosenza by gardeners at the edges

of fountain basins from where it spread to the humid environments of the municipal park, where it can now be considered naturalized.

L. Bernardo, G. Maiorca, N.G. Passalacqua

Stachys thirkei K.Koch. (Lamiaceae)

+ MAR: Fermo, Monte Rosato (WGS84 43.129556N, 13.702611E), prato arido a sud del bosco su substrato argilloso, 88 m, 6 June 2015, *M. Tiburtini* (FI). – Species new for the flora of Marche.

Stachys thirkei is an E-Mediterranean species spreading from Italy to Turkey (Euro+Med 2006). In Italy, it is reported in Emilia-Romagna and Abruzzo, whereas in other regions, from Toscana to Sicilia, it is considered as recorded by mistake (Bartolucci et al. 2018b), possibly due to misidentification (Falciani 1997). In addition to the population on Mt. Rosato, a second locality was found 5.3 km away (WGS84 43.085333N, 13.725194E), on an arid roadside. Living plants from both populations are cultivated *ex-situ* in the Botanic Garden of the University of Pisa.

M. Tiburtini, F. Roma-Marzio

Umbilicus rupestris (Salisb.) Dandy (Crassulaceae)

+ MAR: Cagli (Pesaro e Urbino), vecchi muri di sostegno tra la SP 29 e la SP 54 (WGS84: 43.544925N, 12.646083E), c. 280 m, 20 June 2015, *L. Gubellini* (FI, PESA). – Species confirmed for the flora of Marche.

This species is recorded in almost all the Italian regions, excluding Val d'Aosta and Friuli Venezia Giulia, and it was considered as misreported for Marche (Bartolucci et al. 2018b), because of confusion with *U. horizontalis* (Guss.) DC. In the detected site, this plant grows among limestones of a retaining wall.

L. Gubellini, N. Hofmann

Valerianella discoidea (L.) Loisel. (Valerianaceae)

+ **LIG**: Pompeiana (Imperia), presso la cappella di San Bernardo, margine di mulattiera in oliveto (WGS84: 43.859167N, 7.891111E), 350 m, 16 May 2015, *S. Peccenini* (FI, GE). – Species confirmed for the flora of Liguria.

Valerianella discoidea occurs in all the southern regions of Italy. It has not been recently confirmed for Liguria (Bartolucci et al. 2018b), although it was mentioned in the past (De Notaris 1844; Burnat 1915) and quoted by Pignatti et al. (2018).

S. Peccenini

Vinca difformis Pourr. subsp. difformis (Apocynaceae)

- BAS. - Species to be excluded from the flora of Basilicata.

In Basilicata, *Vinca difformis* subsp. *difformis* was only indicated by Gavioli (1947) as a very common species in forests and shrublands of the Lucanian Apennines. Despite this, in recent studies the species was never reported (e.g., Aita et al. 1977; Conti et al. 2006; Fascetti et al. 2013; Rosati et al. 2017). In several of the localities indicated by Gavioli (1947) we only detected *V. major* L. subsp. *major*. This must be highlighted since the samples of *V. difformis* by O. Gavioli stored in FI (barcodes FI055689, FI055690) clearly refer to *V. major* subsp. *major*. Similarly, the specimens in HLUC also refer to *V. major* subsp. *major*.

L. Rosati, L. Lastrucci, S. Fascetti

Nomenclatural and distribution updates from other literature sources, and corrigenda

Nomenclatural and distribution updates according to Robson (1993, 1996), Martini et al. (2012), Coulot and Rabaute (2013, 2016), Hilpold et al. (2015), Fraga-Arguimbau (2016), PPG I (2016), Pagitz (2017), Pignatti et al. (2017), Lucchese (2018), Montes-Moreno et al. (2018), Acedo and Llamas (2019), Barberá et al. (2019a, 2019b), Bernardo and Maiorca (2019); Brullo et al. (2019), Buccheri et al. (2019), Carnicero et al. (2019), Conti et al. (2019a, 2019b), Del Guacchio et al. (2019), Di Gristina et al. (2019), Filibeck et al. (2019), Fröhner and Prosser (2019), Gallo (2019), Gonnelli et al. (2019), Gottschlich (2019), Hertel and Presser (2019), Janković et al. (2019), Jiménez-Mejías et al. (2019), Király et al. (2019), La Rosa et al. (2019), Lepší et al. (2019), Llamas and Acedo (2019), López and Devesa (2019), Mascia and Labadessa (2019), Pastore et al. (2019), Peruzzi et al. (2019), Proietti et al. (2019), Prosser and Király (2019), Scafidi and Domina (2019), Sciandrello et al. (2019), Scoppola (2019), Scoppola and Nizzoli (2019), Selvaggi et al. (2019), Sharples and Tripp (2019), Stinca et al. (2019), Zázvorka et al. (2019) and corrigenda to Bartolucci et al. (2018b) are provided in Suppl. material 1.

F. Bartolucci, G. Galasso

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Supplementary material I

Supplementary data

Authors: Fabrizio Bartolucci, Gabriele Galasso

Data type: species data

Explanation note: **1.** Nomenclatural updates **2.** Distribution updates **3.** Synonyms, misapplied or included names **4.** Notes to Notulae to the Italian native vascular flora: 6 (Bartolucci et al. 2018a).

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